**Amendments to the Claims**

*Please amend Claim 19. The Claim Listing below will replace all prior versions of the claims in the application:*

**Claim Listing**

1. (Previously Presented) An oscillator circuit comprising:

an oscillator having a resonant frequency;

an input signal having a frequency about equal to or less than the resonant frequency and having a phase; and

a coupler which couples the input signal with an oscillating signal in the oscillator to filter pulse width variations of the input signal.

2. (Previously Presented) An oscillator circuit as claimed in claim 1 wherein the resonant frequency is about equal to an integer multiple of the frequency of the input signal.

3. (Previously Presented) An oscillator circuit as claimed in claim 2 wherein the input signal has a pulse duration less than or equal to a pulse duration of the oscillating signal.

4. (Previously Presented) An oscillator circuit as claimed in claim 3 wherein the oscillating signal is gated by the input signal to stop the oscillator.

5. (Previously Presented) An oscillator circuit as claimed in claim 3 wherein the input signal comprises a reference clock and a delayed version of the reference clock.

6. (Previously Presented) An oscillator circuit as claimed in claim 3 further comprising a pulse generator which generates the input signal from a reference clock.

7. (Previously Presented) An oscillator circuit as claimed in claim 3 wherein each active edge of the input signal moves the phase of the oscillating signal only part of the distance needed to align it with the input signal.

8. (Previously Presented) An oscillator circuit as claimed in claim 1 wherein the frequency of the input signal is about equal to the resonant frequency.

9. (Previously Presented) An oscillator circuit as claimed in claim 8 in combination with an input oscillator which generates the input signal from a reference clock, the oscillator circuit filtering jitter from the reference clock.

10. (Previously Presented) An oscillator circuit as claimed in claim 8 wherein the coupler provides a filtering time constant which is greater than a cycle time of the input signal.

11. (Previously Presented) An oscillator circuit as claimed in claim 8 wherein the oscillator amplifies the input signal.

12. (Previously Presented) An oscillator circuit as claimed in claim 1 wherein a free running frequency of the oscillator is controlled by a reference delay.

13. (Previously Presented) An oscillator circuit as claimed in claim 1 wherein a free running frequency of the oscillator is controlled by a phase comparator.

14. (Previously Presented) An oscillator circuit as claimed in claim 1 wherein a free running frequency of the oscillator is controlled by a replica oscillator.

15. (Previously Presented) An oscillator circuit as claimed in claim 14 wherein the replica oscillator is controlled by a phase locked loop.

16. (Previously Presented) An oscillator circuit as claimed in claim 14 wherein the replica oscillator is controlled by a delay locked loop.

17. (Previously Presented) An oscillator circuit as claimed in claim 1 wherein the oscillator is a ring oscillator.

18. (Previously Presented) An oscillator circuit as claimed in claim 17 wherein the ring oscillator is a differential oscillator.

19. (Currently Amended) An oscillator circuit as claimed in claim [[18]] 17 wherein the ring oscillator comprises inverter delay elements.

20. (Previously Presented) An oscillator circuit as claimed in claim 18 wherein the coupler comprises a partial NAND gate.

21. (Previously Presented) An oscillator circuit as claimed in claim 18 wherein the coupler comprises a partial NOR gate.

22. (Previously Presented) An oscillator circuit as claimed in claim 18 wherein the ring oscillator comprises three stages.

23. (Previously Presented) An oscillator circuit as claimed in claim 18 wherein the ring oscillator comprises two stages.

24. (Previously Presented) An oscillator circuit as claimed in claim 18 wherein the coupler comprises a conductance between phases of the ring oscillator.

25. (Previously Presented) An oscillator circuit as claimed in claim 24 wherein the conductance comprises an FET.

26. (Previously Presented) An oscillator circuit as claimed in claim 24 wherein the conductance comprises a transmission gate.

27. (Previously Presented) An oscillator circuit as claimed in claim 18 wherein the ring oscillator comprises source coupled stages.

28. (Previously Presented) An oscillator circuit as claimed in claim 1 wherein the oscillator is an LC oscillator.

29. (Previously Presented) An oscillator circuit as claimed in claim 1 wherein the coupler comprises an inverter.

30. (Previously Presented) An oscillator circuit as claimed in claim 1 wherein the coupler comprises a resistor.

31. (Previously Presented) A method of providing an oscillating signal comprising:

generating the oscillating signal in an oscillator, the oscillator having a resonant frequency; and

coupling an input signal, having a frequency about equal to or less than the resonant frequency and having a phase, with an oscillating signal in the oscillator to filter pulse width variations of the input signal.

32. (Previously Presented) A method as claimed in claim 31 wherein the resonant frequency is about equal to an integer multiple of the frequency of the input signal.

33. (Previously Presented) A method as claimed in claim 32 wherein the input signal has a pulse duration less than or equal to a pulse duration of the oscillating signal.

34. (Previously Presented) A method as claimed in claim 33 wherein the oscillating signal is gated by the input signal to stop the oscillator.

35. (Previously Presented) A method as claimed in claim 33 wherein each active edge of the input signal moves the phase of the oscillating signal only part of the distance needed to align it with the input signal.

36. (Previously Presented) A method as claimed in Claim 31 wherein the frequency of the input signal is about equal to the resonant frequency.

37. (Previously Presented) A method as claimed in claim 36 further comprising generating the input signal in an input oscillator from a reference clock, the oscillator filtering jitter from the reference clock.

38. (Previously Presented) A method as claimed in claim 36 wherein the coupler provides a filtering time constant which is greater than a cycle time of the input signal.

39. (Previously Presented) A method as claimed in claim 36 wherein the oscillator amplifies the input signal.

40. (Previously Presented) A method as claimed in claim 36 wherein the oscillator is an LC oscillator.

41. (Previously Presented) An oscillator circuit comprising:

oscillator means having a resonant frequency;

an input signal having a frequency about equal to or less than the resonant frequency and having a phase; and

coupler means which couples the input signal with an oscillating signal in the oscillating means to filter pulse width variations of the input signal.

42. (Previously Presented) An oscillator circuit comprising:

a ring oscillator having a resonant frequency;

an input signal having a frequency about equal to or less than the resonant frequency and having a phase; and

a coupler which couples the input signal with an oscillating signal in the ring oscillator to cause a phase shift of the oscillating signal towards the phase of the input signal where each active edge of the input signal moves the phase of the oscillating signal to align the oscillating signal with the input signal.

43. (Previously Presented) An oscillator circuit as claimed in claim 42 wherein the resonant frequency is about equal to an integer multiple of the frequency of the input signal.

44. (Previously Presented) An oscillator circuit as claimed in claim 43 wherein the input signal has a pulse duration less than or equal to a pulse duration of the oscillating signal.

45. (Previously Presented) An oscillator circuit as claimed in claim 44 wherein the oscillating signal is gated by the input signal to stop the oscillator.

46. (Previously Presented) An oscillator circuit as claimed in claim 44 wherein each active edge of the input signal moves the phase of the oscillating signal only part of the distance needed to align it with the input signal.

47. (Previously Presented) An oscillator circuit as claimed in claim 44 wherein the input signal comprises a reference clock and a delayed version of the reference clock.

48. (Previously Presented) An oscillator circuit as claimed in claim 44 further comprising a pulse generator which generates the input signal from a reference clock.

49. (Previously Presented) An oscillator circuit as claimed in claim 42 wherein the frequency of the input signal is about equal to the resonant frequency.

50. (Previously Presented) An oscillator circuit as claimed in claim 49 wherein the ring oscillator filters the input signal.

51. (Previously Presented) An oscillator circuit as claimed in claim 50 wherein the ring oscillator filters pulse width variations of the input signal.

52. (Previously Presented) An oscillator circuit as claimed in claim 50 in combination with an input oscillator which generates the input signal from a reference clock, the ring oscillator circuit filtering jitter from the reference clock.

53. (Previously Presented) An oscillator circuit as claimed in claim 50 wherein the coupler provides a filtering time constant which is greater than a cycle time of the input signal.

54. (Previously Presented) An oscillator circuit as claimed in claim 50 wherein the ring oscillator amplifies the input signal.

55. (Previously Presented) A method of providing an oscillating signal comprising:

generating the oscillating signal in a ring oscillator, the ring oscillator having a resonant frequency; and

coupling an input signal, having a frequency about equal to or less than the resonant frequency and having a phase, with an oscillating signal in the ring_oscillator to cause a phase shift of the oscillating signal towards the phase of the input signal where each active edge of the input signal moves the phase of the oscillating signal to align the oscillating signal with the input signal.

56. (Previously Presented) An oscillator circuit comprising:

ring_oscillator means having a resonant frequency;

an input signal having a frequency about equal to or less than the resonant frequency and having a phase; and

coupler means which couples the input signal with an oscillating signal in the ring oscillating means to cause a phase shift of the oscillating signal toward the phase of the input signal where each active edge of the input signal moves the phase of the oscillating signal to align the oscillating signal with the input signal.

57. (Previously Presented) An oscillator circuit comprising:

an oscillator having a resonant frequency;

an input signal having a frequency about equal to or less than the resonant frequency and having a phase; and

a coupler which couples the input signal with an oscillating signal in the oscillator, and at each cycle, the oscillating signal being gated by the input signal.

58. (Previously Presented) An oscillator circuit as claimed in claim 57 wherein the resonant frequency is about equal to an integer multiple of the frequency of the input signal.

59. (Previously Presented) An oscillator circuit as claimed in claim 58 wherein the input signal has a pulse duration less than or equal to a pulse duration of the oscillating signal.

60. (Previously Presented) An oscillator circuit as claimed in claim 58 wherein the oscillating signal is gated by the input signal to stop the oscillator.

61. (Previously Presented) An oscillator circuit comprising:

an oscillator having a resonant frequency;

an input signal having a frequency about equal to or less than the resonant frequency and having a phase; and

a coupler which couples the input signal with an oscillating signal in the oscillator, the oscillating signal being gated by the input signal, where the input signal comprises a reference clock and a delayed version of the reference clock.

62. (Previously Presented) An oscillator circuit as claimed in claim 58 further comprising a pulse generator which generates the input signal from a reference clock.

63. (Previously Presented) An oscillator circuit as claimed in claim 58 wherein the oscillator amplifies the input signal.

64. (Previously Presented) A method of providing an oscillating signal comprising:

generating the oscillating signal in an oscillator, the oscillator having a resonant frequency; and

coupling an input signal, having a frequency about equal to or less than the resonant frequency and having a phase, with an oscillating signal in the oscillator, and for each cycle, gating, by the input signal, the oscillating signal.

65. (Previously Presented) An oscillator circuit comprising:

oscillator means having a resonant frequency;

an input signal having a frequency about equal to or less than the resonant frequency and having a phase; and

coupler means which couples the input signal to an oscillating signal in the oscillating means, and for each cycle, the oscillating signal being gated by the input signal.

66. (Previously Presented) An oscillator circuit comprising:

an oscillator having a resonant frequency;

an input signal having a frequency about equal to or less than the resonant frequency and having a phase;

a pulse generator which generates an input signal from a reference clock; and

a coupler which couples the input signal with an oscillating signal, the input signal having a pulse duration less than or equal to a pulse duration of the oscillating signal.

67. (Previously Presented) An oscillator circuit as claimed in claim 66 wherein the resonant frequency is about equal to an integer multiple of the frequency of the input signal.

68. (Previously Presented) An oscillator circuit as claimed in claim 67 wherein the oscillating signal is gated by the input signal to stop the oscillator.

69. (Previously Presented) An oscillator circuit as claimed in claim 67 wherein the input signal comprises a reference clock and a delayed version of the reference clock.

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71. (Previously Presented) An oscillator circuit as claimed in claim 67 wherein each active edge of the input signal moves the phase of the oscillating signal only part of the distance needed to align it with the input signal.

72. (Previously Presented) An oscillator circuit as claimed in claim 66 wherein the frequency of the input signal is about equal to the resonant frequency.

73. (Previously Presented) An oscillator circuit as claimed in claim 72 wherein the oscillator filters the input signal.

74. (Previously Presented) An oscillator circuit as claimed in claim 73 wherein the oscillator filters pulse width variations of the input signal.

75. (Previously Presented) An oscillator circuit as claimed in claim 73 in combination with an input oscillator which generates the input signal from a reference clock, the oscillator circuit filtering jitter from the reference clock.

76. (Previously Presented) An oscillator circuit as claimed in claim 73 wherein the coupler provides a filtering time constant which is greater than a cycle time of the input signal.

77. (Previously Presented) An oscillator circuit as claimed in claim 73 wherein the oscillator amplifies the input signal.

78. (Previously Presented) A method of providing an oscillating signal comprising:

generating the oscillating signal in an oscillator, the oscillator having a resonant frequency;

a pulse generator which generates an input signal from a reference clock; and

coupling an input signal, having a frequency about equal to or less than the resonant frequency and having a phase, with an oscillating signal in the oscillator, the input signal having a pulse duration less than or equal to a pulse duration of the oscillating signal.

79. (Previously Presented) An oscillator circuit comprising:

oscillator means having a resonant frequency;

an input signal having a frequency about equal to or less than the resonant frequency and having a phase;

a pulse generator which generates an input signal from a reference clock; and

coupler means which couples the input signal to an oscillating signal in the oscillating means, the input signal having a pulse duration less than or equal to a pulse duration of the oscillating signal.

80. (Previously Presented) An oscillator circuit as claimed in claim 42 wherein the ring oscillator is a differential oscillator.

81. (Previously Presented) An oscillator circuit as claimed in claim 80 wherein the ring oscillator comprises inverter delay elements.

82. (Previously Presented) An oscillator circuit as claimed in claim 80 wherein the coupler comprises a partial NAND gate.

83. (Previously Presented) An oscillator circuit as claimed in claim 80 wherein the coupler comprises a partial NOR gate.

84. (Previously Presented) An oscillator circuit as claimed in claim 80 wherein the ring oscillator comprises three stages.

85. (Previously Presented) An oscillator circuit as claimed in claim 80 wherein the ring oscillator comprises two stages.

86. (Previously Presented) An oscillator circuit as claimed in claim 80 wherein the coupler comprises a conductance between phases of the ring oscillator.

87. (Previously Presented) An oscillator circuit as claimed in claim 86 wherein the conductance comprises an FET.

88. (Previously Presented) An oscillator circuit as claimed in claim 86 wherein the conductance comprises a transmission gate.

89. (Previously Presented) An oscillator circuit as claimed in claim 80 wherein the ring oscillator comprises source coupled stages.

90. (Previously Presented) An oscillator circuit as claimed in claim 58 wherein the input signal comprises a reference clock and a delayed version of the reference clock.

91. (Previously Presented) An oscillator circuit as claimed in claim 61 wherein the resonant frequency is about equal to an integer multiple of the frequency of the input signal.

92. (Previously Presented) An oscillator circuit as claimed in claim 91 wherein the input signal has a pulse duration less than or equal to a pulse duration of the oscillating signal.

93. (Previously Presented) An oscillator circuit as claimed in claim 91 wherein the oscillating signal is gated by the input signal to stop the oscillator.

94. (Previously Presented) An oscillator circuit as claimed in claim 91 further comprising a pulse generator which generates the input signal from a reference clock.

95. (Previously Presented) An oscillator circuit as claimed in claim 91 wherein the oscillator amplifies the input signal.